

ABSTRACT OF THE DISCLOSURE

B³ A full complement angular ball bearing with no cage and having a contact angle from 10 to 45° and an increased number of balls for use under severe conditions. The life is extended by defining the surface roughness of the inner ring and the outer ring, defining the roughness ratio of them relative to the rolling element, defining the Cr content in the alloy steel for the rolling element, forming the rolling element with oxide ceramics, or providing a dense nitride layer on the surface of the rolling element, avoiding the presence of particles with a mean diameter in excess of 3 μm on the raceway surfaces of the outer ring and the inner ring, or coating a film of a hardness higher than that of the raceway surface of the outer ring and the inner ring on the surface of the rolling element.
